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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,521	09/24/2001	Hiroshi Nomura	P21183	5318

7055 7590 03/04/2003

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EXAMINER

THOMPSON, TIMOTHY J

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 03/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,521

Applicant(s)

NOMURA ET AL.

Examiner

Timothy J Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claim 5 recites the limitation "the central axes" in line 2 of claim 5. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 7 recites the limitation "the optical axes direction" in line 8 of claim 7. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 6 are rejected under 35 U.S.C. 102(anticipated) as being by Sato et al.(U.S. Patent No. 5,701,208).

Regarding claim 1, Sato et al. discloses at least first(fig 2, 23), and second axes(fig 8, 45); wherein one of said first and second axes rotatably supports at least two gears arranged one after the other in the axial direction

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thereof, said at least two gears being independently rotatable with respect to each other(fig 3, 42, 44), and the other of said first and second axes rotatably supports at least one gear(fig 1, 21), and wherein said gears provided on said first and second axes are engaged with each other in such a manner that said gear supported on one of said first and second axes successively and alternatively engages with said gear supported on the other of said first and second axes(col 4, lines 3-49).

Regarding claim 5, Sato et al. discloses gears supported by the central axes are identical to each other(col 4, lines 31-36).

Regarding claim 6, Sato et al. discloses reduction gear mechanism is arranged in a zoom lens barrel(col 1, lines 1-5).

Claims 8 and 9 are rejected under 35 U.S.C. 102(anticipated) as being by Edwards(U.S. Patent No. 4,662,241).

Regarding claim 8, Edwards discloses at least two gear supporting axes which extend parallel to each other(fig 3, 114, 116); and at least three gears, a first gear and a third gear thereof being rotatably supported on said first gear supporting axis at different positions in an axial direction(fig 3, 190, 192), said first and third gears being independently rotatable with respect to each other(col 5, lines 29-31), and a second gear thereof being rotatably supported on said second gear supporting axis(fig 4, 226, 230), wherein said first gear engages with said second gear, and said second gear engages with said first gear and said third gear(fig 4).

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Regarding claim 9, Edwards discloses a forth gear which is rotatably supported on said second gear supporting axis at a different position in the axial direction with respect to said second gear(fig 4, 228), said forth gear being independently rotatable with respect to said second gear(col 5, lines 57-58), and wherein said third gear engages with said second gear and said fourth gear(fig 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsons(U.S. Patent No. 4,595,081) in view of Edwards(U.S. Patent No. 4,662,241).

Regarding claim 1, Parsons discloses at least first(fig 8, 25, the axis that runs along this shaft) and second axes(fig 8, 56, the axis that runs along this shaft); wherein one of said first and second axes rotatably supports at least two gears arranged one after the other in the axial direction thereof, said at least two gears being independently rotatable with respect to each other(fig 8, 45, 77), and the other of said first and second axes rotatably supports at least one gear(fig 8,

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52, 53), and wherein said gears provided on said first and second axes are engaged with each other in such a manner that said gear supported on one of said first and second axes successively and alternatively engages with said gear supported on the other of said first and second axes(fig 8). Parsons does not specifically disclose that the two axis extend parallel to each other. However, Edwards discloses when meshing gears, attached to two different axis, placing the axes parallel to each other(col 3, line 55). It would have been obvious to one skilled in the art, at the time of the invention, to place the two axes parallel to each other as shown by Edwards, in the gear mechanism of Parsons, since as shown by Edwards, gears which mesh with each other and attached to separate axes, commonly have their axes parallel to each other so as to ensure the gears properly mesh with each other.

Regarding claim 2, Parsons, discloses each of said first and second axes rotatably supports two gears arranged one after the other in the axial direction thereof(fig 8, 45, 52, 53, 77).

Regarding claim 3, Parsons, discloses each of said gears supported by said parallel central axes is a double gear having a larger gear portion and a smaller gear portion, the smaller gear portion of said double gear supported by one of said central axes engaging with the larger gear portion of said double gear supported by the other central axis(fig 8, 45, 52, 53, 77).


Regarding claim 4, Parsons, discloses each of said double gears, the larger gear engages with a preceding gear and the smaller gear engages with a

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succeeding gear, with respect to the direction of driving transmission(fig 8, 45, 52, 53, 77).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (703) 305-0881. If the examiner can not be reached his supervisor, Georgia Epps, can be reached on (703) 308-4883.


T.J.T.

2/28/03